## **ABSTRACT**

An amplification apparatus that has a distortion detection loop that detects distortion components contained in an amplified signal to be amplified that is amplified by an amplifier 3, and a distortion removal loop that removes distortion components from the amplified signal, using the distortion components detected by the distortion detection loop, combines a reference signal (pilot signal) with the signal to be amplified, and performs control relating to distortion compensation, using said reference signal, to provide improved efficiency with respect to a configuration to perform control relating to distortion compensation, using a reference signal. A signal to be amplified is detected by amplification signal detection means 11 ~ 13 and 21, and when it is detected by the amplification signal detection means that there is no input of a signal to be amplified, reference signal control means 21, 15 perform control to effect non-output of the reference signals.

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